

What is claimed is:

1 1. A machine readable medium containing configuration instructions for
2 performing a method for retrieving data accessible by posing a plurality of queries over a
3 network to at least one target server, the method comprising the steps of:

4 selecting a plurality of proxy server services;

5 transmitting a first one of the plurality of queries to a first one of the
6 plurality of proxy server services for transmission to one of the at least one target servers;

7 transmitting a second one of the plurality of queries to a second one of the
8 plurality of proxy server services for transmission to one of the at least one target servers;

9 and

10 for each one of the plurality of queries, receiving from its corresponding
11 proxy server service a reply from its corresponding target server.

1 2. The machine readable medium of claim 1, wherein said selecting step
2 comprises:

3 searching the network for proxy server services;

4 for each service found in the searching step, testing the service using test
5 criteria; and

6 selecting those services meeting the test criteria.

1 3. The machine readable medium of claim 2, wherein the test criteria
2 include retrieval time.

1 4. The machine readable medium of claim 2, wherein the test criteria
2 include number of errors in a response to a test query.

1 5. The machine readable medium of claim 2, wherein the selecting step
2 includes selecting a primary list of proxy services meeting a first set of criteria and a
3 secondary list of proxy services meeting a second set of criteria.

1 6. The machine readable medium of claim 1, wherein the method further
2 comprises the step of ranking the selected proxy server services according to test criteria,
3 and wherein the transmitting step includes transmitting the query to a best-ranked
4 available one of said services.

1 7. The machine readable medium of claim 1, wherein the method further
2 comprises the step of adding dummy queries to the plurality of queries to be assigned and
3 transmitted.

1 8. The machine readable medium of claim 1, wherein the method further
2 comprises the step of pausing for a substantially unpredictable time interval before
3 performing the transmitting step.

1 9. The machine readable medium of claim 1, wherein said transmitting
2 step comprises transmitting the queries to random ones of the selected proxy server
3 services.

1 10. The machine readable medium of claim 1, further comprising the step
2 of constructing at least one of said queries based on replies received in response to
3 previous queries.

11. The machine readable medium of claim 1, wherein the plurality of queries are posed through a restricted interface that returns the k data points closest to a query point, and the method further includes the steps of:

- calculating a maximum radius from a previous query point to a data point returned by the corresponding query;
- determining a region within R covered by the previous query based on the corresponding maximum radius;
- computing quadtrees of progressively greater levels until a computed quadtree has an uncovered node entirely outside the covered region; and
- constructing a subsequent query to contain a query point that is a center of the uncovered quadtree node.

12. The machine readable medium of claim 1, further comprising the step of constructing a database view of the data received from the proxy server services.

13. A method for retrieving data accessible by posing a plurality of queries over a network to at least one target server, the method comprising the steps of:

- selecting a plurality of proxy server services;
- transmitting a first one of the plurality of queries to a first one of the plurality of proxy server services for transmission to one of the at least one target servers;
- transmitting a second one of the plurality of queries to a second one of the plurality of proxy server services for transmission to one of the at least one target servers;
- and

for each one of the plurality of queries, receiving from its corresponding proxy server service a reply from its corresponding target server.

14. The method of claim 13, wherein said selecting step comprises:
searching the network for proxy server services;
for each service found in the searching step, testing the service using test criteria; and
selecting those services meeting the test criteria.

15. The method of claim 14, wherein the test criteria include retrieval time.

16. The method of claim 14, wherein the test criteria include number of errors in a response to a test query.

17. The method of claim 14, wherein the selecting step includes selecting a primary list of proxy services meeting a first set of criteria and a secondary list of proxy services meeting a second set of criteria.

18. The method of claim 13, further comprising the step of ranking the selected proxy server services according to test criteria, and wherein the transmitting step includes transmitting the query to a best-ranked available one of said services.

19. The method of claim 13, further comprising the step of adding dummy queries to the plurality of queries to be assigned and transmitted.

1 20. The method of claim 13, further comprising the step of pausing for a
2 substantially unpredictable time interval before performing the transmitting step.

1 21. The method of claim 13, wherein said transmitting step comprises
2 transmitting the queries to random ones of the selected proxy server services.

1 22. A method of configuring a client machine connected to a network, the
2 method comprising transmitting configuration instructions through the network to the
3 client machine for performing a method of retrieving information accessible by posing a
4 plurality of queries over the network to at least one target server, the retrieval method
5 comprising the steps of:

6 selecting a plurality of proxy server services;

7 transmitting a first one of the plurality of queries to a first one of the
8 plurality of proxy server services for transmission to one of the at least one target servers;

9 transmitting a second one of the plurality of queries to a second one of the
10 plurality of proxy server services for transmission to one of the at least one target servers;

11 and

12 for each one of the plurality of queries, receiving from its corresponding
13 proxy server service a reply from its corresponding target server.

1 23. The method of claim 22, wherein said selecting step comprises:

2 searching the network for proxy server services;

3 for each service found in the searching step, testing the service using test
4 criteria; and

5 selecting those services meeting the test criteria.

1 24. The method of claim 23, wherein the test criteria include retrieval
2 time.

1 25. The method of claim 23, wherein the test criteria include number of
2 errors in a response to a test query.

1 26. The method of claim 23, wherein the selecting step includes selecting
2 a primary list of proxy services meeting a first set of criteria and a secondary list of proxy
3 services meeting a second set of criteria.

1 27. The method of claim 22, wherein the retrieval method further
2 comprises the step of ranking the selected proxy server services according to test criteria,
3 and wherein the transmitting step includes transmitting the query to a best-ranked
4 available one of said services.

1 28. The method of claim 22, wherein the retrieval method further
2 comprises the step of adding dummy queries to the plurality of queries to be assigned and
3 transmitted.

1 29. The method of claim 22, wherein the retrieval method further
2 comprises the step of pausing for a substantially unpredictable time interval before
3 performing the transmitting step.

1 30. The method of claim 22, wherein said transmitting step comprises
2 transmitting the queries to random ones of the selected assigned proxy server services.

- 1 31. The machine readable medium of claim 22, further comprising the step
- 2 of constructing a database view of the data received from the proxy server services.